

## **CURRICULUM VITAE: DAVID J. WAXMAN**

**ADDRESS:** Department of Biology, Boston University  
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Boston, MA 02215  
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### **EDUCATION:**

1972-1975 B.A. in CHEMISTRY, Queens College, CUNY  
1975-1976 A.M. in CHEMISTRY, Harvard University  
1976-1980 Ph.D. in BIOCHEMISTRY and MOLECULAR BIOLOGY, Harvard University

### **POSTDOCTORAL TRAINING:**

1980-1983 Research Fellow, Department of Chemistry, Massachusetts Institute of Technology

### **ACADEMIC APPOINTMENTS:**

1983-1986 Assistant Professor of Biological Chemistry,  
Department of Biological Chemistry and  
Dana-Farber Cancer Institute, Harvard Medical School  
1986-1993 Associate Professor of Biological Chemistry (1986-1987) and of  
Biological Chemistry & Molecular Pharmacology (1987-1993),  
Department of Biological Chemistry & Molecular Pharmacology and  
Dana-Farber Cancer Institute, Harvard Medical School  
1994-present Professor of Cell and Molecular Biology, Department of Biology, Boston University  
1998-present Professor of Medicine, Boston University School of Medicine

### **AWARDS, HONORS and SPECIAL APPOINTMENTS:**

1972-1975 New York State Regents Scholar  
1975 Konkol Chemistry Prize, Queens College, CUNY  
1975 Summa Cum Laude, Queens College, CUNY  
1975 Phi Beta Kappa  
1980 Jane Coffin Childs Fund for Medical Research Fellowship (*declined*)  
1980 Anna Fuller Fund Fellowship (*declined*)  
1980 Visiting Scientist, Department of Biophysics, Weizmann Institute of Science  
1980-1981 Damon Runyon-Walter Winchell Cancer Fund Fellowship  
1981-1983 National Institutes of Health Postdoctoral Fellowship  
1983 Research Corporation Award  
1988 Rita Allen Foundation Scholar Award, Harvard Medical School nominee, Awardee finalist  
1993 Burroughs-Wellcome Endocrine Toxicology Symposium Lectureship  
1994-1998 Howard Hughes Medical Institute-sponsored Senior Faculty Appointment, Boston Univ.  
1999-2005 Deputy Director, Superfund Basic Research Program, Boston University  
2000-2001 Visiting Scientist, Cancer Genomics Program, Whitehead Institute Genome Center, M.I.T.  
2003-present Top 100 Cited Researchers in Pharmacology and Toxicology, Thomson-ISI  
*Citation rank: 13 of top 100 researchers for 1996-2006*  
2005 Twenty Year Highly Cited Researcher in Pharmacology, 1985-2004, Thomson-ISI

### **EDITORIAL BOARD MEMBERSHIPS:**

1990-1994 Associate Managing Editor, Biochimica et Biophysica Acta, Elsevier Science Publishing  
1995-1997 Associate Executive Editor, Biochimica et Biophysica Acta, Elsevier Science Publishing  
1992-present Editorial and Advisory Board, Molecular Pharmacology  
1992-present Editorial Advisory Board, Biochemical Journal  
1992-present Editorial Board, Pharmacology

1993-present	Editorial Academy, International Journal of Oncology
1994-present	Editorial Board, Drug Metabolism and Disposition
1996-2000	Editorial Board, Journal of Biological Chemistry
1997-present	Editorial Advisory Board, Journal of Pharmacy and Pharmaceutical Sciences
1997-present	Editorial Board, Xenobiotica
1997-present	Editorial Academy, International Journal of Molecular Medicine
1999-present	Editorial Board, Cancer Gene Therapy
2000-2003	Editorial Board, Molecular Endocrinology
2001-present	Editorial Board, Molecular Cancer Therapeutics
2002-2004	Editorial Advisory Board, Biochemical Pharmacology
2002-2005	Editorial Board, Endocrinology
2003-present	Editorial Board, Cancer Therapy
2004-present	Associate Editor, Letters in Drug Design and Discovery
2004-present	Editorial Board, Medical Hypothesis and Research
2004-2006	Editorial Board, Archives of Biochemistry and Biophysics
2005-present	Editorial Board, Medicinal Chemistry
2006-present	Associate Editor, PPAR Research
2006	Managing Editorial Board, Frontiers in Bioscience ( <i>declined</i> ).
2007-present	Editorial Board, Open Drug Metabolism
2007	Editorial Advisory Board, Recent Patents on Endocrine, Metabolic and Immune Drug Discovery ( <i>declined</i> )
2007	Editorial Board, The Open Toxicology Journal
2008-2011	Editorial Board, Endocrinology

#### **STUDY SECTION REVIEW PANEL ACTIVITIES:**

1987	NIH Neurological Sciences Study Section ( <i>Ad Hoc</i> )
1987-1989	NCI Carcinogenesis Study Section, Site Visit Committee ( <i>Ad Hoc Member</i> )
1991-1994	NIH Physical Biochemistry Study Section ( <i>Regular Member</i> )
1992	NIDDK Special Grants Study Section ( <i>Ad Hoc</i> )
1994	NCI Program Project Site Visit Committee ( <i>Member</i> )
1996	NIH Toxicology Study Section ( <i>Ad Hoc</i> )
1997	NCI Intramural Review Board, Site Visit Committee ( <i>Member</i> )
2001	NIEHS Special Emphasis Review Panel: Oxidative Stress ( <i>Member</i> )
2003	NIH Alcohol and Toxicology Special Emphasis Review Panel ( <i>Member</i> )

#### **OTHER REVIEW PANEL and ADVISORY ACTIVITIES:**

1983-1985	Research Consultant, Department of Chemotherapy, Hoffman-La Roche, Inc., NJ
1986-1987	Research Consultant, Division of Hepatic Diseases, NYU Medical Center, NY
1991-1992	Research Consultant, Dept. of Pathology, Rhode Island Hospital, Brown University
1990-1996	Committee on P450 Gene Superfamily Nomenclature
1990	Extramural Advisory Committee, Proposed NASA Specialized Center of Research and Training (NSCORT), Univ. of Louisville, School of Medicine.
1993	American Assoc. of Cancer Research, 1994 Annual Meeting Program Committee
1994	American Inst. Biological Sciences, U.S. Army Breast Cancer Research Program
1996-1998	International Advisory Committee, 12th Intl Symposium on Microsomes and Drug Oxidations (Montpellier, France)
1997	Intramural Review Board of Scientific Counselors, NIEHS, <i>Ad Hoc</i> member
1998-present	International Advisory Board, Microsomes and Drug Oxidations Meeting Series
1998	Scientific Advisory Committee, Brain Tumor Gene Therapy Program, Massachusetts General Hospital, Harvard Medical School
1998-1999	Scientific Advisory Committee, Environmental Health Science Center at Institute of Chemical Toxicology, Wayne State University
1998-present	Scientific Advisory Board, Oxford BioMedica, Oxford, United Kingdom
1998-2000	International Advisory Committee, 13th Intl Symposium on Microsomes and Drug Oxidations (Stresa, Italy)
1999-present	New England Drug Metabolism Discussion Group, Steering Committee and Founding Member

- 2000-present Chairman, Scientific Advisory Committee, Environmental Health Science Center  
at Institute of Chemical Toxicology, Wayne State University
- 2001-present Endocrine Society, Annual Meeting Abstract Review Committee
- 2001-present Scientific Advisory Board, Metabasis Therapeutics, San Diego
- 2001-2002 University of Kansas, NIH COBRE Award Review Panel
- 2002-2004 International Advisory Committee, 15<sup>th</sup> Intl Symposium on Microsomes and Drug  
Oxidations (Mainz, Germany)
- 2003 GH-IGF Int'l Symposium 2004, Abstract Review Committee
- 2007- External Examiner, PhD Thesis Defense, Karolinska Institute, Stockholm
- 2007-present University of Rhode Island, External Advisory Committee, NIH COBRE Award.

**MAJOR RESEARCH INTERESTS:**

Molecular Endocrinology and Cell Signaling, Cancer Gene Therapy, Nuclear Receptors in Toxicology, Liver Gene Expression, Anticancer Pharmacology, Prodrug Activation, Drug Action and Drug Resistance, Steroid Metabolism and Action, Biochemistry of Membrane Proteins

**SPECIALIZED FIELDS of EXPERTISE**

Growth Hormone signaling and liver gene expression  
Sexual dimorphism of hepatic cytochrome P450  
Regulation of liver P450s by nuclear receptors and xenobiotics  
Prodrug-activation gene therapy for cancer  
Hepatic drug metabolism and cancer pharmacology

**UNIVERSITY and DEPARTMENTAL PROGRAMS and COMMITTEES:**

- 1983-1985 Animal Care and Use Committee, Dana-Farber Cancer Institute
- 1983-1990 Program in Cell and Development Biology, Harvard Medical School
- 1984-1988 Program in Higher Degrees in Biophysics, Harvard University
- 1986-1987 Seminar Series Committee, Dept. of Biological Chemistry, Harvard Medical School
- 1986-1991 Seminar Series Committee, Dana-Farber Cancer Institute
- 1988-1991 Junior Faculty Search Committees, Toxicology Program, Harvard Sch. of Public Health
- 1995-1998 Cell and Molecular Biology Seminar series, Co-chair, Boston University
- 1996-1997 Dept. of Biology Graduate Committee, Boston University
- 1996-1997 Dept. of Biology Academic Conduct Committee, Boston University
- 1996-1997 Molecular Biology, Cellular Biology and Biochemistry Program,  
Graduate Admissions Committee, Boston University
- 1996-1998 Dept. of Biology, Biochemistry Graduate Qualifying Exam Committee
- 1997-1998 Cell and Molecular Biology, Junior Faculty Search Committee, Boston University
- 1997-1999 Boston University Medical Center, Continuing Medical Education Faculty
- 1995-present Accelerated Medical Program Admissions Committee, Boston University
- 1996-present Turner Award Committee, Boston University
- 1997-2000 Institutional Animal Care and Use Committee, Boston University
- 1998-2000 Dept. of Biology Graduate Committee, Boston University
- 1998-1999 Graduate Committee on Academic Standards, Boston University
- 1998-2000 Dept. of Biology, Graduate Preliminary / Qualifying Examination Committee, Chairman
- 1999-2000 Bioinformatics Program Seminar Committee
- 1999-2000 Dept. of Biology, Library and On-line Journals Committee, Chairman
- 1999-2000 Cell and Molecular Biology, Junior Faculty Search Committee, Boston University
- 2001-2003 Graduate Program in Bioinformatics, Admissions Committee
- 2002-2004 Dept. of Biology, Appointments, Tenure and Promotion (APT) Committee
- 2004-2005 Graduate Program in Bioinformatics, Advising, Recruitment and Application Review  
Committee, Boston University
- 2005-2006 Bioinformatics Program, Faculty Search Committee
- 2005-present Boston University Charles River Campus Patent Committee
- 2006 Dept. of Biology, Faculty Merit Review Committee
- 2006 Science and Engineering Research Symposium, Poster Judge Committee
- 2006 Faculty Facilitator, Responsible Conduct of Research Training Program

2006-2007 Dept. of Biology, Faculty Search Committee, Cell and Molecular Biology  
 2006-2007 Chairman, Academic Standards Committee, Bioinformatics Program  
 2007-2012 Bioinformatics NSF IGERT Training Grant, Co-PI

#### **SOCIETY MEMBERSHIPS:**

1986-present American Society for Biochemistry and Molecular Biology (ASBMB)  
 1986-present American Association for Cancer Research (AACR)  
 1988-present The Endocrine Society  
 1992-present The Biochemical Society  
 1993-1995 American Association for the Study of Liver Diseases (AASLD)  
 1994-present International Society for the Study of Xenobiotics (ISSX)  
 1997-present Canadian Society for Pharmaceutical Sciences (CSPS), Honorary Member  
 1999-present American Society for Pharmacology and Experimental Therapeutics (ASPET)  
 2002-present Growth Hormone Research Society (GRS)  
 2002-present American Society for Gene Therapy

#### **OTHER REVIEW ACTIVITIES:**

##### **JOURNAL REVIEW**

*Reviewer of Journal Articles for numerous Scientific Journals, including:* Antimicrob Agents Chemother, Am J Human Genetics, Am J Physiol, Archives Biochemistry and Biophysics, BMC Molecular Biology, Biochem and Cell Biology, Biochem J, Biochemistry, Biochimica Biophysica Acta, Biochemical Pharmacology, Biology Reproduction, Br J Pharmacol, Can J Physiol Pharmacol, Cancer Chemother Pharmacol, Cancer Gene Therapy, Cancer Research, Cell Death and Differentiation, Chemical Research in Toxicology, Chirality, Clin Canc Res, Diabetes, Drug Metab Dispos, Endocrinology, Eur J Biochem, Eur J Clin Pharmacol, Eur J Pharmacol, FASEB J, Gastroenterology, Gene Therapy, Genetic Analysis, Genomics, Hepatology, Intl Immunol, Intl J Cancer, Intl J Oncology, J Am Geriatric Soc, J Acquired Immune Deficiency Syndromes, J Bacteriology, J Biochemical Toxicology, J Biological Chemistry, J Cell Biology, J Clinical Investigation, J Clinical Oncology, J Clinical Psychopharmacology, J Gene Medicine, J Infectious Diseases, J Inorganic Biochem, J Lipid Res, J Molec Endocrinol, J Molec Evolution, J Neuroendocrinology, J Pediat Endocrinol Metab, J Pharm Exp Therap, Metabolism Clinical and Experimental, Molecular Cancer Therapeutics, Molecular Carcinogenesis, Molecular Cellular Biology, Molecular Endocrinology, Molecular Genetics and Metabolism, Molecular Pharmacology, Nature Biotechnology, Pediatric Endocrinol Reviews, Pediatric Research, Pharmacogenetics, Physiological Genomics, Proc Natl Acad Sci USA, Proc Soc Exp Biol Med, Protein Science, Science, Toxicology, Toxicol Appl Pharmacol, Trends in Genetics, Trends in Pharmacol Sciences, Xenobiotica

#### **RESEARCH GRANT REVIEW**

*Reviewer of Research Grant Proposals and Foundation Awards for:* National Institutes of Health, National Science Foundation, American Cancer Society, American Institute of Biological Sciences, Anti-Cancer Foundation of Univ S Australia, Assoc Francaise contre les Myopathies, Association for International Cancer Research, Australia Research Grants Science, Biotechnology and Biological Sciences Research Council – UK, British Columbia Health Care Research Foundation, Canadian Institutes of Health Research, Eppley Foundation, Hong Kong Research Grants Council, International Science Foundation, Israel Academy of Sciences and Humanities Basic Research Foundation, Josef Steiner Foundation Cancer Research Award, Louisiana Board of Regents Research Support Fund, Medical Research Council of Canada, Raine Medical Research Foundation, Research Corporation, Scotland Biomedical and Therapeutic Research Committee, Swiss National Science Foundation, Veterans Administration, Wellcome Trust

#### **INVITED SPEAKER – NATIONAL and INTERNATIONAL CONFERENCES and MAJOR SYMPOSIA:**

Table Ronde Roussel Uclaf on  $\beta$ -Lactam Antibiotics  
 Paris, France, December 1979.  
 EMBO Workshop on Mode of Action of  $\beta$ -Lactam Antibiotics  
 El Escorial, Spain, July 1982.

- Janssen Research Foundation 4th International Symposium on Comparative Biochemistry:  
Cytochrome P-450. Beerse, Belgium, August 1985.
- Cytochrome P-450 - 25 Years of Progress  
Philadelphia, Pennsylvania, June 1987.
- 3d Biochemical Pharmacology Symposium: Stereochemistry in Drug Action  
Oxford, United Kingdom, July 1987.
- Gordon Research Conference on Hormonal Carcinogenesis  
New Hampton, New Hampshire, August 1987.
- Mannering Symposium on Drug Metabolism  
Minneapolis, Minnesota, June 1988.
- 6th International Conference on Biochemistry and Biophysics of Cytochrome P450  
Vienna, Austria, July 1988.
- U.S.-Japan Cancer Cooperative Meeting: Cytochrome P450 and Carcinogenesis  
Oahu, Hawaii, January 1989.
- 8th International Symposium on Microsomes and Drug Oxidations, Discussion Session  
Chairman: Cytochrome P450 Phosphorylation. Stockholm, Sweden, June 1990.
- 12th European Workshop on Drug Metabolism  
Basel, Switzerland, September 1990.
- International Ares-Serono Symposium: A Molecular View of Steroid Biosynthesis and Metabolism  
Jerusalem, Israel, October 1991.
- 9th New England Membrane Enzyme Meeting, Conference Chairman and Organizer  
Centre Harbor, New Hampshire, November 1991.
- Am Soc Pharmacol Exp Therapeutics ASPET-FASEB Symposium: Cytochrome P450--Model for  
Integral Membrane Protein Turnover. Anaheim, California, April, 1992.
- Am Assoc Study Liver Diseases (AASLD) Spring Conference: Hepatocyte Differentiation--  
Biological and Pathobiological Significance, Mackinac Island, Michigan, June 1992.
- 9th International Symposium on Microsomes and Drug Oxidations  
Jerusalem, Israel, July 1992.
- Intl Soc Study Xenobiotics (ISSX) Workshop on Evaluation of Human P450s: Role in Metabolism  
Bal Harbour, Florida, November, 1992.
- 10th New England Membrane Enzyme Meeting, Conference Chairman and Organizer  
Centre Harbor, New Hampshire, November 1992.
- 2nd Boston Area Receptor Society Meeting  
Boston, Massachusetts, May 1993.
- 5th North American Intl Soc Study Xenobiotics (ISSX) Meeting  
Tucson, Arizona, October 1993.
- 8th Intl Conf Cytochrome P450: Biochemistry, Biophysics & Molecular Biology  
Lisbon, Portugal, October 1993.
- Burroughs-Wellcome Symposium on Endocrine Toxicology  
Raleigh-Durham, North Carolina, November 1993.
- Swedish Society of Medicine, Drug Resistance Workshop  
Stockholm, Sweden, March 1994.
- Schering Foundation Workshop on Cytochrome P450 Enzymes in Drug Research  
Berlin, Germany, March 1994.
- 10th International Symposium on Microsomes and Drug Oxidations  
Toronto, Canada, July 1994.
- 6th North American Intl Soc Study Xenobiotics (ISSX) Meeting  
Raleigh-Durham, North Carolina, October 1994.
- 12th New England Membrane Enzyme Conference  
Woods Hole, Massachusetts, November 1994.
- Amer Soc Clinical Pharmacol Therap Annual Meeting  
San Diego, California, March 1995.
- 3rd Boston Area Receptor Society Meeting  
Boston, Massachusetts, June 1995.
- Intl Symp DHEA Transformation into Androgens and Estrogens: Intracrinology  
Quebec City, Quebec, September 1995.

13th New England Membrane Enzyme Conference  
Sturbridge, Massachusetts, November 1995.

Society of Toxicology Annual Meeting  
Anaheim, California, March 1996.

4th Boston Area Receptor Society Meeting  
Boston, Massachusetts, June 1996.

Gordon Research Conference on Drug Metabolism  
New Hampton, New Hampshire, July 1996.

11th Intl Symp Microsomes and Drug Oxidations  
Los Angeles, California, July 1996.

7th North American Intl Soc Study Xenobiotics (ISSX) Short Course on Metabolism in Cancer  
Chemotherapy, Chairman and Organizer. San Diego, California, October 1996.

14th New England Membrane Enzyme Conference  
Sturbridge, Massachusetts, November 1996.

5th Boston Area Receptor Society Meeting  
Boston, Massachusetts, June 1997.

Gordon Research Conference on Drug Metabolism  
New Hampton, New Hampshire, July 1997.

10th Intl Conf Cytochrome P450  
San Francisco, California, August 1997.

Microsomes, Drug Oxidations and Clinical Pharmacology Satellite Symposium  
Berlin, Germany, September 1997.

2nd World Congr Advances in Oncology  
Athens, Greece, October 1997 (*declined*).

15th New England Membrane Enzyme Conference  
Brownsville, Vermont, November 1997.

Society of Toxicology, Canada, Signal Transduction Symposium  
Montreal, Canada, December 1997.

Gordon Research Conference on Prolactin  
Ventura, California, February 1998.

6th Boston Area Receptor Meeting  
Boston, Massachusetts, June 1998.

12th Intl Symp Microsomes and Drug Oxidations  
Montpellier, France, July 1998.

Serono Symposium: Sex-Steroid Interactions with Growth Hormone  
Naples, Florida, October 1998.

5th Intl Meeting, Intl Soc Study Xenobiotics (ISSX)  
Cairns, Australia, October 1998 (*declined*).

1st Intl Symp Molecular Medicine  
Crete, Greece, October 1998 (*declined*).

Novartis Foundation Symposium: Pulsatile Hormone Secretion  
London, United Kingdom, March 1999.

Wellcome Center for Medical Science Symposium  
London, United Kingdom, March 1999.

ENDO '99, Endocrine Society Annual Conference  
San Diego, California, June 1999.

11th Intl Conference Cytochrome P450  
Sendai, Japan, August 1999.

Hepatocyte Model System Symposium, Bristol-Myers Squibb  
Princeton, New Jersey, October 1999.

28th Intl Symp Growth Hormone and Growth Factors in Endocrinology and Metabolism  
Boston, Massachusetts, October 1999.

17th New England Membrane Enzyme Conference  
Woods Hole, Massachusetts, November 1999.

BIO2000 TechTransfer Forum  
Boston, Massachusetts, March 2000.

4th Intl Conf Drug-Drug Interactions  
Baltimore, Maryland, June 2000 (*declined*).

ENDO 2000, Symposium on Growth Hormone and Prolactin Signal Transduction  
Toronto, Canada, June 2000.

13th Intl Symp Microsomes and Drug Oxidations  
Stresa, Italy, July 2000.

Institute of Scientific Exchange Conf: Early Toxicity Screening in Drug Discovery  
Baltimore, Maryland, October 2000.

Genetic Toxicology Association Annual Meeting  
Delaware, October 2000.

5th World Cong Advances in Oncology  
Crete, Greece, October 2000 (*declined*).

11th Congress, Intl Society of Endocrinology  
Sydney, Australia, October 2000 (*declined*).

Toxicology Forum, FDA Office of Women's Health Program  
Washington DC, February 2001.

Rozman Symposium Lecture, Delaware Valley Drug Metabolism Discussion Group  
Bucks County, Delaware, May 2001.

12th Intl Conference Cytochrome P450  
La Grande Motte, France, September 2001 (*declined*).

ISSX 2001 International Symposium  
Munich, Germany, October 2001 (*declined*).

4th Intl Symp Molecular Medicine  
Crete, Greece, October 2001 (*declined*).

Japan Neuroendocrine Society Annual Meeting  
Tokyo, Japan, October 2001 (*declined*).

10<sup>th</sup> Intl Conf Gene Therapy of Cancer  
San Diego, December 2001.

New England Drug Metabolism Discussion Group Meeting  
Cambridge, Massachusetts, January 2002.

ENDO 2002, Symposium on Growth Hormone and Prolactin Signaling  
San Francisco, June 2002.

American Cancer Society Schilling Conference 2002: Tumors as Outlaw Organs  
Santa Cruz, California, September 2002.

Intl Congress on Hormonal Steroids and Hormones and Cancer  
Fukuoka City, Japan, October 2002 (*declined*).

7<sup>th</sup> World Congress on Advances in Oncology  
Crete, Greece, October 2002 (*declined*).

Growth Hormone – Insulin-like Growth Factor Symposium 2002  
Boston, Massachusetts, October 2002.

American Assoc Pharmaceutical Scientists (AAPS) Annual Meeting  
Toronto, Canada, November 2002.

British Toxicology Society Annual Congress  
Edinburgh, Scotland, April 2003.

13<sup>th</sup> Intl Conf Cytochrome P450  
Prague, Czech Republic, July 2003.

Superfund Basic Research Program, Annual Mtg  
Dartmouth, New Hampshire, November 2003.

Experimental Biology 2004, ASPET Symposium: Cancer Chemotherapy and Drug Metabolism  
Washington DC, April 2004.

3<sup>rd</sup> PCB Workshop 2004  
Univ. of Illinois, Champaign/Urbana, June 2004.

Pharmaceutical Education Associates Prodrug Symposium  
Philadelphia, Pennsylvania, June 2004.

15<sup>th</sup> Intl Sympos Microsomes and Drug Oxidations  
Mainz, Germany, July 2004.

- 43<sup>rd</sup> Ann Mtg European Soc Pediatric Endocrinology  
Basel, Switzerland, September 2004.
- 1<sup>st</sup> Ann *In Vitro* ADMET Technologies Conf  
Cambridge, Massachusetts, October 2004.
- 7<sup>th</sup> Intl Symp Molecular Medicine  
Crete, Greece, October 2004 (*declined*).
- North Jersey ACS Drug Metabolism Discussion Group Symposium  
Somerset, New Jersey, October 2004 (*declined*).
- Children's Oncology Group/ ASCO Symposium: Apoptosis and Cancer Therapy  
Atlanta, Georgia, November 2004.
- 6<sup>th</sup> Intl Workshop Pharmacodynamics of Anti-cancer Agents  
Venice, Italy, November 2004.
- Pharmaceutical Education Associates Symposium on Prodrugs and Soft Drugs  
Philadelphia, Pennsylvania, June 2005 (*declined*).
- Int'l Conf on Gene and Drug Therapy  
Crete, Greece, September 2005 (*declined*).
- 22<sup>nd</sup> New England Membrane Enzyme Group Conference  
Sturbridge, Massachusetts, November 2005.
- Prolactin Family Gordon Research Conference  
Ventura, California, January 2006.
- Israeli Society of Gene Therapy, 4<sup>th</sup> Annual Conference  
Tel Aviv, Israel, March 2006.
- ENDO 2006, Endocrine Society Annual Meeting,  
Boston, Massachusetts, June 2006.
- 16<sup>th</sup> Intl Sympos Microsomes and Drug Oxidations  
Budapest, Hungary, September 2006.
- Drug and Gene-based Therapeutics  
Crete, Greece, September 2006 (*declined*).
- 11<sup>th</sup> World Congress on Advances in Oncology  
Crete, Greece, October 2006 (*declined*).
- American Assoc Pharmaceutical Scientists (AAPS) Annual Mtg  
San Antonio, Texas, November 2006.
- 23<sup>rd</sup> New England Membrane Enzyme Group Conference  
Sturbridge, Massachusetts, November 2006.
- 4<sup>th</sup> Copenhagen Workshop on Endocrine Disrupters  
Copenhagen, Denmark, May 2007.
- 15<sup>th</sup> Intl Conf Cytochromes P450: Biochemistry, Biophysics, Functional Genomics  
Bled, Slovenia, June 2007.
- 10<sup>th</sup> Intl Symp Molecular Medicine  
Crete, Greece, October 2007.
- American Assoc Pharmaceutical Scientists (AAPS) Annual Mtg  
San Diego, November 2007.
- Amer Soc Clin Pharmacol and Therap (ASCPT) Annual Meeting  
Orlando, Florida, April 2008
- 17<sup>th</sup> Intl Sympos Microsomes and Drug Oxidations,  
Saratoga Springs, NY, July 2008

**INVITED SPEAKER - DEPARTMENTAL SEMINAR SERIES:**

- 1980 - Bristol-Myers Research Labs, Dept. of Medicinal Chemistry  
1980 - Weizmann Institute of Science, Dept. of Biophysics  
1980 - Tel Aviv University, Dept. of Biochemistry  
1981 - Harvard University, Dept. of Biochemistry and Molecular Biology  
1982 - Yale University School of Medicine, Dept. of Pharmacology  
1982 - University of Pennsylvania, Dept. of Pharmacology  
1982 - Dana-Farber Cancer Institute, Division of Cancer Pharmacology



1982 - The Rockefeller University  
1982 - Harvard Medical School, Dept. of Biological Chemistry  
1982 - Brown University, Division of Biology and Medicine  
1983 - Hoffman-La Roche, Inc., Dept. of Chemotherapy  
1984 - University of Connecticut Health Center, Dept. of Pharmacology  
1984 - Johns Hopkins University, Dept. of Chemistry  
1985 - National Cancer Institute, Laboratory of Molecular Carcinogenesis  
1986 - New York University, Dept. of Cell Biology  
1986 - DuPont de Nemours & Co., Cardiovascular Group, Wilmington  
1987 - Univ. of Medicine and Dentistry of New Jersey, Dept. of Biochemistry  
1987 - University College, London, Dept. of Biochemistry  
1987 - University of Massachusetts Amherst, Dept. of Biochemistry  
1988 - Harvard School of Public Health, Laboratory of Toxicology  
1988 - W. R. Grace & Company, Lexington, Massachusetts  
1988 - University of Mainz, West Germany, Institute of Toxicology  
1989 - University of Rochester School of Medicine, Dept. of Biophysics  
1989 - Wadsworth Center Laboratories, State of New York, Dept. of Health, Albany  
1989 - Boston University Medical Center, Dept. of Pharmacology  
1989 - Tufts University School of Medicine, Dept. of Biochemistry  
1989 - St. Jude Children's Research Hospital, Pharmaceutical Division  
1990 - University of Massachusetts Medical Center Worcester, Dept. of Biochemistry & Molec Biology  
1990 - University of Louisville School of Medicine, Dept. of Biochemistry  
1991 - Rhode Island Hospital, Dept. of Pathology  
1992 - University of Pennsylvania, Dept. of Pharmacology  
1992 - Cornell Medical School, Div. of Digestive Diseases  
1992 - Boston University Medical Center, Dept. of Pharmacology  
1992 - Chicago Medical School, Dept. of Pharmacology and Molecular Biology  
1992 - McArdle Laboratory, University of Wisconsin, Dept. of Oncology  
1992 - Tufts University School of Medicine, Dept. of Pharmacology and Experimental Therapeutics  
1992 - Albert Einstein College of Medicine Liver Center  
1992 - Wadsworth Research Laboratories, State of New York, Dept. of Health, Albany  
1992 - Massachusetts General Hospital, Dept. of Surgery and Shriners' Hospital Liver Center  
1993 - Moffit Cancer Center, Univ. of South Florida  
1993 - Boston University, Dept. of Biology  
1993 - George Washington University Medical School, Dept. of Biochemistry and Molecular Biology  
1993 - Institute of Chemical Toxicology, Wayne State University  
1993 - Massachusetts General Hospital East, Neurosciences Center  
1993 - Cornell Medical School, Div. of Digestive Diseases  
1994 - University of Uppsala, Dept. of Biochemistry  
1994 - Boston University, Center for Advanced Biotechnology and Cell and Molecular Biology  
1995 - Scripps Research Foundation, Division of Biochemistry  
1995 - National Cancer Institute, Div. of Cancer Therapeutics, Drug Discovery Program  
1995 - Genzyme Corporation, Div. of Molecular Biology and Gene Therapy  
1995 - Cancer Research Center, Laval University, Quebec  
1995 - University of Toronto, Dept. of Pharmacology  
1995 - Massachusetts General Hospital Cancer Center, Div. of Hematology/Oncology  
1996 - Boston University Medical Center, Dept. of Pharmacology  
1996 - New York University, Dept. of Cell Biology  
1996 - Genetics Institute, Preclinical Pharmacokinetics Division  
1996 - Boston University Medical Center, Dept. of Biochemistry  
1997 - Fuji ImmunoPharmaceuticals Corporation, Div. of Drug Development  
1997 - University of Virginia Health Sciences Center, Div. of Endocrinology  
1997 - University of Kentucky at Lexington, Dept. of Toxicology  
1997 - Dartmouth Medical School, Dept. of Pharmacology  
1997 - Oxford BioMedica, Oxford, United Kingdom  
1997 - Yale University Medical School, Div. of Gastroenterology

1998 - Univ. of Massachusetts Med Center., Worcester, Dept. of Pharmacology & Molecular Toxicology  
1998 - Boston University Medical Center, Cancer Research Center, Hematology-Oncology Division  
1998 - Dana Farber Cancer Institute, Clinical Pharmacology STAMP Research Group  
1998 - National Cancer Institute, Developmental Therapeutics Program  
1999 - McGill University, Montreal Children's Hospital Research Institute  
1999 - Vion Pharmaceuticals, Biology Department, New Haven  
1999 - Metabasis Therapeutics, Inc., San Diego  
2000 - Eisai Research Institute, Andover, Massachusetts, Division of Metabolism and Pharmacokinetics  
2000 - X-Ceptor Therapeutics, Inc., San Diego  
2000 - Boston University Medical Center, Dept. of Pathology  
2000 - DuPont Pharmaceuticals, Division of Toxicology, Newark, Delaware  
2000 - Children's Hospital, Harvard Medical School, Endocrine Division  
2000 - ArQule, Inc., Dept. of Biology, Woburn, Massachusetts  
2000 - 3M Medical Department, Toxicology Tech Forum, St. Paul, Minnesota  
2000 - Wyeth-Ayerst Research, Medical Affairs, Philadelphia, Pennsylvania  
2000 - Penn State University, Center for Molecular Toxicology  
2001 - Rockefeller University, Division of Endocrinology and Reproductive Biology and Population Council  
2001 - Wyeth-Ayerst Drug Metabolism Division, Princeton, New Jersey  
2001 - Hadassah Medical School, Gene Therapy Center, Jerusalem, Israel  
2001 - Hebrew University, Institute of Life Sciences, Jerusalem, Israel  
2001 - University of London, Dept. of Pharmaceutical and Biological Chemistry, London  
2001 - Baylor College of Medicine, Dept. of Pharmacology, Houston  
2001 - Boston University Medical Center, Dept. of Pharmacology  
2001 - Absorption Systems, Dept. of Drug Metabolism and Pharmacokinetics, Exton, Pennsylvania  
2001 - Pfizer Pharmaceuticals, Dept. of Pharmacokinetics, Dynamics and Metabolism  
2001 - Metabasis Therapeutics, Dept. of Biological Sciences, San Diego  
2002 - Boston University Medical Center, Dept. of Medicine, Hematology/Oncology Section  
2003 - Oncology Research and Development Group, AstraZeneca, Waltham, Massachusetts  
2003 - University of Alabama, Birmingham, Dept. of Cell Biology  
2003 - University of Dundee Biomedical Research Centre, Scotland  
2003 - Astex Technology, Cambridge, England  
2003 - Boston University, School of Dental Medicine, Dept. of Molecular and Cell Biology  
2003 - Tufts University, School of Medicine, Dept. of Pharmacology and Experimental Therapeutics  
2004 - Wadsworth Center, NY State Dept. of Health, Albany, New York  
2004 - Boston Medical Center, GI Grand Rounds, Division of Gastroenterology  
2004 - Austrianova, Dept. of Science and Technology, Vienna, Austria  
2004 - Padua University, Dept. of Oncology and Surgical Sciences, Padua, Italy  
2005 - Univ. of Connecticut, Dept. of Pharmaceutical Sciences, School of Pharmacy, Storrs, CT  
2006 - Univ. of Texas Medical Branch, Galveston, Dept. of Pharmacology and Toxicology  
2006 - Savad Institute of Gene Therapy, Hadassah University Hospital, Jerusalem, Israel  
2007 - Hebrew University, Dept. of Biological Chemistry, Jerusalem, Israel  
2007 - Hebrew University, Faculty of Agriculture, Food and Environmental Quality Sciences, Rehovot, Israel  
2007 - University of Rhode Island, Center for Molecular Toxicology, College of Pharmacy  
2007 - Medical College of Wisconsin, Dept. of Pharmacology and Toxicology  
2007 - Karolinska Institute, Dept. of Physiology and Pharmacology, Stockholm, Sweden  
2007 - University of Iowa, Dept. of Occupational and Environmental Health

## WAXMAN LABORATORY RESEARCH SUPPORT

### (I) MAJOR RESEARCH GRANTS (Principal Investigator)

1. National Institutes of Health Grant DK 33765, 4/1984 - 1/2008.  
"Biochemistry of Cytochrome P-450: Biosynthetic Isozymes", 4/1984 - 3/1987.  
"Cytochrome P-450: Endogenous Substrate Metabolism", 4/1987 - 1/2008.
2. National Institutes of Health Grant CA49248, 7/1991 - 4/2009.  
"Hepatic Metabolism of Anticancer Drugs".
3. National Institutes of Health Grant ES07381, 5/1995 - 3/2010.  
"Activation of Orphan Receptors by Chlorinated Hydrocarbons", 5/1995-3/2000.  
"PPAR, Hormones and Xenobiotics", 4/2000-3/2005.  
"Nuclear Receptors and Gonadal Toxicity of Xenochemicals", 4/2005-3/2010.
4. National Science Foundation, EHR DGE 0654108, 7/ /2007 - 6/2012.  
"IGERT: Integrating Computational Science into Research in Biological Networks"  
Gary Benson, PI; David J. Waxman, co-PI. *Expected to be funded.*
5. National Institutes of Health Grant DK53767, 8/1999 - 7/2004.  
"NADPH P450 Reductase: Thyroid Hormone Regulation".
6. American Cancer Society Grant, BC-462/CN-14, 7/1984 - 6/1998.  
"Oxidative Metabolism of Xenobiotics".
7. American Cancer Society Grant, CH-487, 1/1990 - 12/1993.  
"Mechanisms of Acquired Drug Resistance".
8. National Institutes of Health Grant CA19589, 9/1985 - 4/1991.  
"Biochemical Studies of Human Liver Folylpolyglutamate Synthetase".

### (II) OTHER RESEARCH FUNDING

1. Research Corporation Award, 11/1983.  
"Biochemical Studies of Mammalian Liver Sulfoxide Reductase".
2. American Cancer Society Grant, Massachusetts Division, 11/1983 - 10/1984.  
"Oxidative Metabolism of Steroids and Foreign Compounds".
3. Biomedical Research Support Grant, 11/1983 - 10/1984.  
"Sex-related Differences in Xenobiotic Metabolism".
4. Biomedical Research Support Grant, 7/1985 - 9/1985.  
"Metabolism of Antifolate Drugs".
5. Biomedical Research Support Grant, 11/1986 - 10/1987.  
"Interactions of Anti-cancer Drugs with Cytochrome P-450".
6. Biomedical Research Support Grant, 7/1991 - 6/1992.  
"Activation of Liver Gene Expression and Peroxisome Proliferation by the Peroxisome Proliferator Receptor".
7. Hoffmann-La Roche Research Grant, 12/1983 and 12/1984.
8. Mathers Research Foundation Grant, 2/1986.
9. W.R. Grace/New England Deaconess Hospital Grant, 4/1989.
10. National Cancer Institute/SAIC Frederick Cancer Research and Development.  
"Human Cytochrome P450 Expression in Tumor Cell Lines", 10/1995.

- "P450 Expression in NCI Tumor Cell Lines", 6/1997.
- 11. National Institutes of Health Grant (S10) RR11397, 8/1996, Co-P.I.  
"Acquisition of a Molecular Imager".
- 12. Genetics Institute Research Contract, 10/1996.  
"Drug-Drug Interactions of IL-11 and Cyclophosphamide".
- 13. 3M Corporation Research Contract, 12/2000.  
"Xenochemical Receptor trans-Activation by Perfluorooctane-based Chemicals".
- 14. 3M Corporation Research Contract, 10/2001, 10/2002.  
"Trans-activation of Xenoreceptors by Perfluorochemicals".
- 15. NSF IGERT Grant DGE-0654108, 7/2007-6/2012, DJ Waxman, co-PI.  
"Integrating Computational Science into Research in Biological Networks".

### (III) POSTDOCTORAL, GRADUATE and UNDERGRADUATE FELLOWSHIP AWARDS

- 1. Damon Runyon-W. Winchell Cancer Fund - Postdoct. Fellowship, D.J. Waxman, 9/1980-8/1981.  
NRSA- Postdoctoral Fellowship, D.J. Waxman (F32) GMES 07935, 9/1981-6/1983.  
"Mechanism-based Inactivation of Cytochrome P-450".
- 2. NRSA- Postdoctoral Fellowship, E.J. Holsztynska (F32) AM 07648, 6/1985-5/1988.  
"Biochemistry and Regulation of Cholesterol 7 $\alpha$ -Hydroxylase".
- 3. NRSA - Postdoctoral Fellowship, G.A. LeBlanc (F32) CA 08259, 3/1987-3/1990.  
"Cytochrome P-450-Anticancer Drug Interactions".
- 4. American Heart Association - Postdoctoral Fellowship, S.S. Sundseth, 7/1989-6/1991.  
"Biochemistry and Regulation of Cholesterol 7 $\alpha$ -Hydroxylase".
- 5. Deutsche Forschungsgemeinschaft - Postdoctoral Fellowship, G. F. Weber, 1/1990-6/1991.  
"Biochemical Pharmacology of Anticancer Drugs".
- 6. Canadian Assoc Gastroenterology - Postdoctoral Fellowship, T.K.H. Chang 7/1991-6/1992.  
Canadian Liver Foundation - Postdoctoral Fellowship, T.K.H. Chang, 7/1992-6/1994.  
"Bioactivation of Cancer Chemotherapeutic Drugs by Liver P450 Enzymes".
- 7. Assoc pour la Recherche Contre le Cancer (ARC) - Postdoctoral Fellowship, Y. Jounaidi,  
1/1996-12/1996. "Retroviral Expression of P450 Genes: Cancer Gene Therapy".
- 8. Howard Hughes Undergraduate Summer Research Fellowship, J. Matias, 1996.  
"Modulation of Alternative Pathways of Ifosfamide Metabolism".
- 9. National Science Foundation Undergraduate Summer Research Fellowship, R. Anard, 1996.  
"Activation and Deactivation of Ifosfamide by Cytochrome P450".
- 10. Assoc pour la Recherche Contre le Cancer (ARC) - Postdoctoral Fellowship, E. Brain,  
2/1996-11/1996. "Modulation of Oxazaphosphorine Metabolism: Preclinical Models".
- 11. National Science Foundation Undergraduate Summer Research Scholarship, H. Burden, 1997.  
"Role of CYP3A in Anticancer Drug Activation".
- 12. Ernst Schering Research Foundation Postgraduate Fellowship, Y. Jounaidi, 10/97-9/99.  
"Cytochrome P450-based Cancer Gene Therapy".

13. Howard Hughes. Undergraduate Summer Research Fellowship, L. Lin, 1999.  
"Retroviral Packaging in Transient and Stable Cell Lines".
14. NRSA - Postdoctoral Fellowship, C.H. Hurst (F32) ES 011105, 4/2001-3/2004.  
"Apoptosis Suppression by Peroxisome Proliferators".
15. NRSA - Postdoctoral Fellowship, T. Su (F32) CA 10139, 4/2004 - 6/2006.  
"Apoptosis Modulation in Prodrug Activation Gene Therapy".
16. National Cancer Institute Minority Supplement Award, E. Manley, 8/2004-6/2009.  
"Hepatic Metabolism of Anti-cancer Drugs".
17. Belgian American Educational Foundation (BAEF), Franqui Foundation Fellowship Award, V. Wauthier, 9/2006-8/2007. "Role of GH in the Regulation of Sex-specific Liver P450 Genes".

#### THESIS MENTORSHIP - Undergraduate

1. Wankin Yu, Harvard University. (1979) "Biochemical studies on penicillin action: isolation and characterization of linear uncross-linked peptidoglycan derived from *Bacillus subtilis*".  
Publication: (1980) J Biol Chem **255**, 11577-11587.
2. David M. Lindgren, Harvard University. (1979) "Purification of several of the high molecular weight penicillin-binding proteins from *Bacillus subtilis* and *Staphylococcus aureus*".  
Publication: (1981) J Bacteriol **148**, 950-955.
3. Jocelyne R. Matias, Boston University. (1997) "Identification of cytochrome-P450 isozymes in human tumor cell lines".
4. Heather Burden, Boston University. (1998) "P450 enzyme CYP3A5 as a candidate for gene therapy in conjunction with the anticancer drugs cyclophosphamide and ifosfamide".
5. Ira S. Winer, Boston University. (1999) "The effect of exogenous Bcl-2 family protein expression on the chemosensitivity of mouse NIH-3T3 fibroblasts".
6. Anthony J. Patrello, Boston University. (2000) "Characterization and tagging of the closely related STAT5a and STAT5b".
7. Luke Lin, Boston University. (2000) "Retroviral packaging in transient and stable cell lines".

#### THESIS MENTORSHIP - Masters

- 1/2. Katja Gustafsson and Pernille Drewes, The Royal Danish School of Pharmacy and Boston University, M.A. (1996) "Modulation of the pharmacokinetics of the activation and deactivation pathways of the anticancer prodrugs cyclophosphamide and ifosfamide in the rat".  
Publications: (1998) Br J Cancer **77**, 1768-1776; (1999) J Pharm Exp Therap **288**, 928-937
3. Blossom Y.-P. Wu, Boston University, M.A. (1998)  
"Functional significance of tyrosine phosphatases in growth hormone signaling".
4. Erin K. Maloney, Boston University, M.A. (1999)  
"P450-mediated metabolism of trichloroethylene and activation of the peroxisome proliferator-activated receptor (PPAR)".  
Publication: (1999) Toxicol Appl Pharmacol **161**, 209-218.
5. Suneet K. Bains, Boston University, M.A. (2000)

"Growth hormone-dependent intracellular localization of STAT5b".

6. Jack Lin, Boston University, M.A. (2001)  
"Metabolism of anti-cancer drugs cyclophosphamide and ifosfamide by site-specific CYP2B1 mutants".  
Publication: (2004) Molec Pharmacol **65**, 1278-1285.
7. Alexander Baldwin, Boston University, M.A. (2002) "Identification of novel enzyme-prodrug combinations for use in cytochrome P450 gene therapy".  
Publication: (2003) Arch Biochem Biophys **409**, 197-206.
8. Hong Lu, Biomolecular Pharmacology Program, Boston University, M.A. (2005) "Activation of Methoxymorpholinyl doxorubicin".  
Publication: (2005) Molec Pharmacol **67**, 212-219.
9. Caitlin O'Connor, Cell and Molecular Biology, Boston University (2006) "Growth hormone regulation of sex-dependent rodent and human liver cytochrome P450 genes and the desensitization of GH signal transduction".  
Publication: (2006) Molec Endocrinol **20**, 2613-2629.

#### THESIS MENTORSHIP - Ph.D.

1. Hee K. Choi, Cell & Molecular Biology, Boston University, Ph.D. (2000).  
"The role of STAT5b in growth hormone-dependent, male-specific liver gene expression".  
Publications: (1999) Endocrinology **140**, 5126-5135; (2000) Endocrinology **141**, 3245-3255.  
(2000) GH & IGF Research **10**, Suppl B, S1-S8.
2. Yuanchun Zhou, MCBB Program, Boston University, Ph.D. (2000).  
"Inhibitory cross-talk between PPAR $\alpha$  and STAT5b signaling pathways".  
Publications: (1996) Molec Pharmacol **50**, 67-74; (1998) Environ Health Perspect **106S4**, 983-988;  
(1999) J Biol Chem **274**, 2672-2681; (1999) J Biol Chem **274**, 29874-29882.  
(2002) Toxicol Appl Pharmacol **182**, 1-10.
3. Jodi E. D. Hecht, Cell & Molecular Biology, Boston University, Ph.D. (2002).  
"In vitro and in vivo models for cytochrome P450-based anti-cancer gene therapy".  
Publications: (1998) Canc Res **58**, 4391-4401; (2000) Meth Molec Med **35**, 77-83.  
(2000) Meth Molec Med **35**, 85-94; (2000) Meth Molec Med **35**, 95-105.  
(2000) Meth Molec Med **35**, 107-118.
4. Pamela S. Schwartz, MCBB Program, Boston University, Ph.D. (2002).  
"Impact of apoptotic factors on cytochrome P450-dependent cyclophosphamide anti-cancer activity".  
Awards: (2001) Boston University Science Day, Technology Transfer Award.  
Publications: (2001) Molec Pharmacol **60**, 1268-1279; (2002) Canc Res **62**, 6928-6937.  
(2003) Canc Gene Ther **10**, 571-582; (2003) Canc Res **63**, 8563-8572.
5. Christopher Wiwi, Cell & Molecular Biology, Boston University, Ph.D. (2004).  
"Growth hormone-regulated hepatic nuclear factors regulate the sex-dependent expression of liver cytochromes P450";  
Awards: (1999) NIH-sponsored Endocrinology Training Grant Fellowship award  
(2001) 19<sup>th</sup> New England Membrane Enzyme Conference poster award  
(2002) ENDO 2002 – Endocrine Society Graduate Student Travel Award  
Publications: (2004) Molec Endocrinol **18**, 1985-1987; (2004) Growth Factors **22**, 79-88.  
(2005) J Biol Chem **280**, 3259-3268; (2006) Biochem J **397**, 159-168.
6. Jonathan Shipley, MCBB Program, Boston University, Ph.D. (2005).

"Cross-talk between hormone-regulated transcription factors, STAT5b and ER, and xenochemical receptors, PPAR and AHR".

Publications: (2003) Molec Pharmacol **64**, 1-10; (2004) Toxicol Appl Pharmacol **199**, 275-284.  
(2004) Toxicol Sci **80**, 151-160; (2006) Toxicol Appl Pharmacol **213**, 87-97.

7. Karl Clodfelter, Bioinformatics Program, Boston University, Ph.D. (2007).  
"Computational analysis of cytochrome P450 structure and expression"  
Publications: (2004) Molec Endocrinol **18**, 747-760; (2006) Molec Endocrinol **20**, 1333-1351.  
(2006) Biochemistry **45**, 9393-9407; (2007) Physiol Genomics, submitted.
8. Minita Gupte Holloway, MCBB Program, Boston University, Ph.D. in progress.  
Awards: (2006) I. Alden Macchi Award for Excellence in Endocrinology & Regulatory Biology  
(2007) NIH-sponsored NICHD Training Grant Fellowship award  
Publications: (2004) Molec Endocrinol **18**, 1975-1987; (2006) Molec Endocrinol **20**, 647-660.  
(2006) Molec Endocrinol **20**, 1333-1351; (2007) Endocrinol **148**, 1977-1986.
9. Jie Ma, MCBB Program, Boston University, Ph.D. in progress.  
Awards: (2005) New England Membrane Enzyme Meeting, Best Poster Award  
(2007) Boston University Science and Engineering Day, Founder's Award  
Publications: (2007) Molec Canc Ther, submitted.
10. Tara Peters, MCBB Program, Boston University, Ph.D. in progress.  
Awards: (2005) NIH-sponsored NICHD Training Grant Fellowship award
11. Eugene Manley, MCBB Program, Boston University, Ph.D. in progress.  
Awards: (2004) National Cancer Institute Minority Supplement Award, five years support.
12. Joshua Doloff, MCBB Program, Boston University, Ph.D. in progress.  
Awards: (2007) Boston University Science and Engineering Day, Technology Development Award.
13. Gregory Miles, Bioinformatics Program, Boston University, Ph.D. in progress.
14. Kendrick Goss, MCBB Program, Boston University, Ph.D. in progress.
15. Mathew Belmonte, Cell & Molecular Biology, Boston University, Ph.D. in progress.

## TEACHING EXPERIENCE:

### A. Course Lecturer, Harvard Medical School:

Biochemistry 201/BCMP 201, Comprehensive Biochemistry

Fall 1984, 1985, 1986, 1987, 1988

Biochemistry 700B/221, Advanced General Biochemistry (Medical School Curriculum)

Fall 1984, 1985, 1986

Biophysics 300, Introduction to Biophysics, Fall 1984, 1985, 1986, 1987

BCMP 202, Eukaryotic Membranes, Spring 1989

BCMP 211, Membrane Structure and Function, Fall 1989, 1991

MFHOS, Metabolism and Physiology (Medical School Curriculum)

Fall 1987, 1988, 1989, 1990, 1991, 1992, 1993

BCMP 218/Toxicology 205, Principles of Toxicology (School of Public Health)

Fall 1988, 1989

Medical Pharmacology, Spring 1987

BCMP 212, Cellular and Molecular Endocrinology, Spring 1990

BCMP 207, Molecular Mechanisms of Drug Action, Spring 1990, 1992

Molecular Basis of Disease (Markey Fellows Medical Biochemistry), Spring 1992, 1993

B. Course Lecturer, Boston University:

BI556, Membrane Biochemistry (Course Director): Spring 1995, Fall 1996, 1998, 2001, 2003, 2005  
MB722, Advanced Biochemistry: Spring 2004, 2005  
BF820, Research Opportunities in Bioinformatics: Spring 2006, Fall 2006  
BUSPH/EH830, Topics in Environmental Health: Spring 1995, 1997  
BUSM/PM7000, Molecular Neurobiology and Pharmacology: Spring 2003, 2004, 2005, 2006, 2007

C. Postdoctoral Fellows under training in the laboratory:

1983-1984 (1); 1984-1985 (2); 1985-1986 (3); 1986-1987 (4)  
1987-1989 (5); 1989-1990 (6); 1990-1995 (7); 1995-1996 (8)  
1996 – present, 6 – 10 postdoctoral trainees each year  
Total Number of Individuals: >35

D. Graduate Student mentoring:

Ph.D. Thesis students: 15 (1994-present)  
Masters Thesis students: 9 (1995-present)  
Rotation training Ph.D. students:  
9 (1985-1993), 6 (1994-1995), 5 (1995-1996), 5 (1996-1997),  
4 (1997-1998), 2 (1998-1999), 5 (1999-2000), 3 (2001-2002),  
3 (2002-2003), 5 (2003-2004), 5 (2004-2005), 3 (2005-2006), 3 (2006-2007)

D. Undergraduate Students: research training, internships or thesis research programs

1983 - 1993: 6 students; 1994 - 1996: 6 students  
1996 - 1997: 2 students; 1997 - 1998: 3 students  
1998 - 1999: 3 students; 1999 - 2000: 2 students  
2004 - 2007: 1-2 students/year



## **BIBLIOGRAPHY**

### **(I) ORIGINAL JOURNAL ARTICLES**

1. Waxman DJ, Strominger JL. Cleavage of a COOH-terminal hydrophobic region from D-alanine carboxypeptidase, a penicillin-sensitive bacterial membrane enzyme: characterization of active, water-soluble fragments. (1979) J Biol Chem **254**, 4863-4875.
2. Waxman DJ, Strominger JL. Cephalosporin-sensitive penicillin-binding proteins of *Staphylococcus aureus* and *Bacillus subtilis* active in the conversion of [<sup>14</sup>C]penicillin G to [<sup>14</sup>C]phenylacetylglycine. (1979) J Biol Chem **254**, 12056-12061.
3. Yocum RR, Waxman DJ, Rasmussen JR, Strominger JL. Mechanism of penicillin action: penicillin and substrate bind covalently to the same active site serine of two bacterial D-alanine carboxypeptidases. (1979) Proc Natl Acad Sci **76**, 2730-2734.
4. Waxman DJ, Yocum RR, Strominger JL. Penicillins and cephalosporins are active site-directed acylating agents: evidence in support of the substrate analog hypothesis. (1980) Phil Trans R Soc Lond **B289**, 257-271.
5. Waxman DJ, Strominger JL. Sequence of active site peptides from the penicillin-sensitive D-alanine carboxypeptidase of *Bacillus subtilis*: mechanism of penicillin action and sequence homology to  $\beta$ -lactamases. (1980) J Biol Chem **255**, 3964-3976.
6. Waxman DJ, Yu W, Strominger JL. Linear, uncrosslinked peptidoglycan secreted by penicillin-treated *Bacillus subtilis*: characterization as a substrate for penicillin-sensitive D-alanine carboxypeptidase. (1980) J Biol Chem **255**, 11577-11587.
7. Waxman DJ. Structural studies of penicillin-sensitive D-alanine carboxypeptidase. (1980) Ph.D. Dissertation, Harvard University.
8. Moews PC, Knox JR, Waxman DJ, Strominger JL. Comparison of predicted secondary structures of  $\beta$ -lactamases and penicillin-sensitive D-alanine carboxypeptidases. (1981) Int J Prot Pept Res **17**, 211-218.
9. Waxman DJ, Strominger JL. Limited proteolysis of the penicillin-sensitive D-alanine carboxypeptidase purified from *Bacillus subtilis* membranes. Active, water-soluble fragments generated by cleavage of a COOH-terminal membrane anchor. (1981) J Biol Chem **256**, 2059-2066.
10. Waxman DJ, Strominger JL. Primary structure of the COOH-terminal membranous segment of a penicillin-sensitive enzyme purified from two bacilli. (1981) J Biol Chem **256**, 2067-2077.
11. Waxman DJ, Lindgren DM, Strominger JL. High-molecular weight penicillin-binding proteins from membranes of bacilli. (1981) J Bacteriol **148**, 950-955.
12. Yocum RR, Amanuma H, O'Brien TA, Waxman DJ, Strominger JL. Penicillin is an active site inhibitor for four genera of bacteria. (1982) J Bacteriol **149**, 1150-1153.
13. Waxman DJ, Amanuma H, Strominger JL. Amino acid sequence homologies between *Escherichia coli* penicillin-binding protein 5 and class A  $\beta$ -lactamases. (1982) FEBS Lett **139**, 159-163.
14. Light DR, Waxman DJ, Walsh C. Studies on the chirality of sulfoxidation catalyzed by bacterial flavoenzyme cyclohexanone monooxygenase and hog liver flavin adenine dinucleotide-containing monooxygenase. (1982) Biochemistry **21**, 2490-2498.
15. Waxman DJ, Light DR, Walsh C. Chiral sulfoxidations catalyzed by rat liver cytochromes P-450. (1982) Biochemistry **21**, 2499-2507.

16. Waxman DJ, Walsh C. Phenobarbital-induced rat liver cytochrome P-450. Purification and characterization of two closely related isozymic forms. (1982) J Biol Chem **257**, 10446-10457.
17. Waxman DJ, Walsh C. Catalytic and structural properties of two new cytochrome P-450 isozymes from phenobarbital-induced rat liver: comparison to the major induced isozymic form. (1982) In: Hietanen E, et al., eds. Cytochrome P-450. Biochemistry, biophysics and environmental implications. New York: Elsevier/Biomedical Press, 311-316.
18. Waxman DJ, Ko A, Walsh C. Testosterone hydroxylations catalyzed by purified rat liver cytochrome P-450 isozymes. (1982) In: Hietanen E, et al., eds. Cytochrome P-450. Biochemistry, biophysics and environmental implications. New York: Elsevier/Biomedical Press, 381-386
19. Waxman DJ, Walsh C. Cytochrome P-450 isozyme 1 from phenobarbital-induced rat liver: Purification, characterization and interactions with metyrapone and cytochrome b<sub>5</sub>. (1983) Biochemistry **22**, 4846-4855.
20. Waxman DJ, Ko A, Walsh C. Regioselectivity and stereoselectivity of androgen hydroxylations catalyzed by cytochrome P-450 isozymes purified from phenobarbital-induced rat liver. (1983) J Biol Chem **258**, 11937-11947.
21. Waxman DJ. Rat hepatic cytochrome P-450 isoenzyme 2c: identification as a male-specific, developmentally-induced steroid 16 $\alpha$ -hydroxylase and comparison to a female-specific cytochrome P-450 isoenzyme. (1984) J Biol Chem **259**, 15481-15490.
22. Tauber AI, Wright J, Higson FK, Edelman SA, Waxman DJ. Purification and characterization of the human neutrophil NADH-cytochrome b<sub>5</sub> reductase. (1985) Blood **66**, 673-678.
23. Waxman DJ, Dannan GA, Guengerich FP. Regulation of rat hepatic cytochrome P-450: age-dependent expression, hormonal imprinting and xenobiotic inducibility of sex-specific isoenzymes. (1985) Biochemistry **24**, 4409-4417.
24. Frey AB, Waxman DJ, Kreibich G. The structure of phenobarbital-inducible rat liver cytochrome P-450 isoenzyme PB-4: production and characterization of site-specific antibodies. (1985) J Biol Chem **260**, 15253-15265.
25. Sehgal RK, Sengupta SK, Waxman DJ, Tauber AI. Enzymatic and chemical reduction of 2-deaminoactinomycins to free radicals. (1985) Anti-cancer Drug Design **1**, 13-25.
26. Rampersaud A, Waxman DJ, Ryan DE, Levin W, Walz FG Jr. Microheterogeneity of a male-specific rat hepatic cytochrome P-450. Existence of three allozymic forms. (1985) Arch Biochem Biophys **243**, 174-183.
27. Dannan GA, Porubek DJ, Nelson SD, Waxman DJ, Guengerich FP. 17 $\beta$ -estradiol 2- and 4-hydroxylation catalyzed by rat hepatic cytochrome P-450: roles of individual forms, inductive effects, developmental patterns and alterations by gonadectomy and hormone replacement. (1986) Endocrinology **118**, 1952-1960.
28. Park SS, Waxman DJ, Miller H, Robinson R, Attisano C, Guengerich FP, Gelboin HV. Preparation and characterization of monoclonal antibodies to pregnenolone 16 $\alpha$ -carbonitrile-inducible rat hepatic cytochrome P-450. (1986) Biochem Pharmacol **35**, 2859-2867.
29. Waxman DJ. Rat hepatic cholesterol 7 $\alpha$ -hydroxylase: biochemical characterization and comparison to constitutive and xenobiotic-inducible cytochrome P-450 enzymes. (1986) Arch Biochem Biophys **247**, 335-345.

30. Guengerich FP, Martin MV, Beaune PH, Kremers P, Wolff T, Waxman DJ. Characterization of rat and human liver microsomal cytochrome P-450 forms involved in nifedipine oxidation, a prototype for genetic polymorphism in oxidative drug metabolism. (1986) J Biol Chem **261**, 5051-5060.
31. Frey AB, Kreibich G, Wadhera A, Clarke L, Waxman DJ. 3-(Trifluoromethyl)-3-(m-[<sup>125</sup>I]iodophenyl)diazirine photolabels a substrate-binding site of rat hepatic cytochrome P-450 form PB-4. (1986) Biochemistry **25**, 4797-4803.
32. Friedberg T, Waxman DJ, Atchison M, Kumar A, Haaparanta T, Raphael C, Adesnik M. Isolation and characterization of cDNA clones for cytochromes P-450 immunochemically related to rat hepatic P-450 form PB-1. (1986) Biochemistry **25**, 7975-7983.
33. Dannan GA, Guengerich FP, Waxman DJ. Hormonal regulation of rat liver microsomal enzymes: role of gonadal steroids in programming, maintenance and suppression of  $\Delta^4$ -steroid 5 $\alpha$ -reductase, flavin-containing monooxygenase and sex-specific cytochromes P-450. (1986) J Biol Chem **261**, 10728-10735.
34. McClellan-Green P, Waxman DJ, Caveness M, Goldstein JA. Phenotypic differences in expression of cytochrome P-450g but not its mRNA in outbred male Sprague-Dawley rats. (1987) Arch Biochem Biophys **253**, 13-25.
35. Clarke L, Rosowsky A, Waxman DJ. Inhibition of human liver folylpolyglutamate synthetase by non  $\gamma$ -glutamylatable folate analogs. (1987) Molec Pharmacol **31**, 122-127.
36. Wright JE, Rosowsky A, Waxman DJ, Trites D, Cucchi CA, Flatow J, Frei E III. Metabolism of methotrexate and  $\gamma$ -tert-butyl-methotrexate by human leukemic cells in culture and by hepatic aldehyde oxidase in vitro. (1987) Biochem Pharmacol **36**, 2209-2214.
37. Holsztyńska EJ, Waxman DJ. Cytochrome P-450 cholesterol 7 $\alpha$ -hydroxylase: Inhibition of enzyme deactivation by structurally diverse calmodulin antagonists and phosphatase inhibitors. (1987) Arch Biochem Biophys **256**, 543-559.
38. Clarke L, Waxman DJ. Human Liver folylpolyglutamate synthetase: biochemical characterization and interactions with folates and folate antagonists. (1987) Arch Biochem Biophys **256**, 585-596.
39. Yeowell HN, Waxman DJ, Wadhera A, Goldstein JA. Suppression of the constitutive, male-specific rat hepatic cytochrome P-450 2c and its mRNA by 3,4,5,3',4',5'-hexachlorobiphenyl and 3-methylcholanthrene. (1987) Molec Pharmacol **32**, 340-347.
40. Schwarz M, Peres G, Buchmann A, Friedberg T, Waxman DJ, Kunz W. Phenobarbital induction of cytochrome P-450 in normal and preneoplastic rat liver: comparison of enzyme and mRNA expression as detected by immunohistochemistry and in situ hybridization. (1987) Carcinogenesis **8**, 1355-1357.
41. Steinberg P, Lafranconi WM, Wolf CR, Waxman DJ, Oesch F, Friedberg T. Xenobiotic metabolizing enzymes are not restricted to parenchymal cells in rat liver. (1987) Molec Pharmacol **32**, 463-470.
42. Waxman DJ, Lapenson DP, Park SS, Attisano C, Gelboin HV. Monoclonal antibodies inhibitory to rat hepatic cytochromes P-450: P-450 form specificities and use as probes for cytochrome P-450-dependent steroid hydroxylations. (1987) Molec Pharmacol **32**, 615-624.
43. Yeowell HN, Waxman DJ, LeBlanc GA, Linko P, Goldstein JA. Induction of rat cytochrome P-450 3 and its mRNA by 3,4,5,3',4',5'-hexachlorobiphenyl. (1988) Molec Pharmacol **33**, 272-278.
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